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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,218	10/31/2003	Chyi-Shan Wang	UVD 0307 VA/40815.412	1496

7590 08/19/2005

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EXAMINER

KOPEC, MARK T

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/698,218

Applicant(s)

WANG ET AL.

Examiner

Mark Kopec

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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This action is responsive to applicant's remarks filed 5/11/05. Claims 1-6 are currently pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Niu et al (6,783,702).

This rejection is maintained for the reasons set forth at pages 2-5 of the Rejection mailed 2/10/05.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nahass et al (5,643,502).

This rejection is maintained for the reasons set forth in the Rejection mailed 7/15/04.

Applicant's arguments filed 5/11/05 have been fully considered but they are not persuasive.

Applicant's remarks regarding Niu are noted. Specifically, applicant contends that the claims of Niu specify carbon nanotubes (as opposed to the instantly claimed carbon nanofibers).

The examiner respectfully submits that a careful reading of Niu discloses the claimed "carbon nanotubes" can be:

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"carbon fibrils having: a substantially constant diameter; a length greater than about 5 times the diameter; an ordered outer region of catalytically grown, multiple, substantially continuous layers of ordered carbon atoms having an outside diameter between about 3.5 and 70 nanometers; and a distinct inner core region, each of the layers and the core being disposed substantially concentrically about the cylindrical axis of the fibrils, said fibrils being substantially free of pyrolytically deposited thermal carbon.

See claim 6 and Liu spec Col 5, line 49 to Col 6, line 10.

These carbon fibrils appear to be the same/substantially the same as the instantly claimed "vapor grown carbon nanofibers".

See instant specification, page 1.

Additionally, the claimed copolymers of Liu clearly meet the instant limitations regarding "polymeric nanocomposite".

Applicant's remarks regarding Nahass are noted. Applicant argues that Nahass does not disclose the claimed conductivity range or percolation threshold.

The examiner respectfully disagrees. The reference clearly teaches percolation threshold values within the claimed range. Col 3, lines 25-28 states: "A conductive, static-dissipative or anti-static polymeric composition having acceptable toughness may be prepared by combining 0.25-50 wt % of carbon fibrils with one or more selected polymeric materials.". The reference teaches conductivity with as little as 0.25 wt% fibrils.

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Additionally, the reference teaches volume resistivity values as low as  $10^2$  or  $10^3$  ohm-cm (tables IV-V).

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

US 2003/0039816 is not available as prior art. The remaining references cited in the 210search report do not disclose the claimed vapor grown carbon nanofibers dispersed with a polymeric matrix.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mark Kopec  
Primary Examiner  
Art Unit 1751

MK  
August 16, 2005